developed CI-AKI. The SYNTAX score did not differ between those who did or did not develop CI-AKI (p=0.188). The mean Mehran score was significantly higher in the CI-AKI arm (13.7 vs 11.1 p<0.001) and gave an AUC on ROC analysis of 0.69 (95%CI 0.6-0.78). A 20% increase in urine IL-18 and NGAL at 2 h increased the AUC to 0.78. Neither albumin:creat ratio (p=0.149) or protein:creat ratio (p=0.635) predicted development of CI-AKI.
Conclusion: The current gold standard for measuring CI-AKI is a rise in serum creatinine but this is of limited value as it does not increase until 48-72 hours post renal injury. Neither the SYNTAX score, nor urinary albuminuria or proteinuria are predictive of CIN development. A 20% rise in urine NGAL and Il-18 within 2 h of procedure allows earlier diagnosis of CI-AKI and improves the diagnostic ability of a well validated risk score for both clinical and investigational purposes.

TCT-88

Twice Daily Dosing of Aspirin is Biologically More Effective in Patients with Type 2 Diabetes Mellitus and Coronary Artery Disease

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Background: The efficacy of aspirin in preventing cardiovascular events appears to be lower in DM patients than in general population. We have previously demonstrated a time-dependent aspirin efficacy suggesting that once daily aspirin does not provide 24h stable biological efficacy, mainly in patients with DM, inflammatory markers and active smokers. The objective of the study was to compare biological efficacy of 150 mg/day aspirin given once daily (OPD) as compared to 150mg/day divided in 75 mg in the morning and 75 mg in the evening (BID) in a cross over study in patients with DM.
Methods: A randomized monocentric prospective study with cross over is realized in 92 patients with DM and previous acute coronary syndrome with high risk of biological aspirin resistance (elevated hsCRP, elevated fibrinogen or current smoking). Primary endpoint is the percentage of aspirin resistant patients measured by light transmission aggregometry using arachidonic acid 0.5mg/mL (LTA-AA). PFA-100 testing, using epinephrine cartridges is also performed. Patients are considered resistant if aggregation is ≥20% with LTA-AA or if PFA-100 epinephrine closure time was ≤193 seconds.
Results: Mean HbA1c is 7.4%±1.2% and 43% of patients are treated with insulin. Mean age is 64±10 y.o., 85% are male, 34% are active smokers and 52% are treated with clopidogrel. There is no difference in mean platelet count (270±78G/L), fibrinogen (3.6±1.0g/L) and hsCRP (5.5±6.9mg/L). Using LTA-AA, mean residual aggregation was 19.7±15.4% on OPD versus 11.9±10.4% on BID (p<0.001). Biological aspirin resistance (residual aggregation ≥ 20%) significantly decrease from 42% on OPD to 17% on BID corresponding to a decrease of 62% (p=0.0005). Based on PFA-100, 41% of patients were resistant on OPD versus 29% on BID (p=0.12). Similar results are found in patients with or without clopidogrel.
Conclusion: In diabetic patients with elevated inflammatory markers or active smoking, the same dose of aspirin BID is biologically more effective than OPD.

TCT-89

Impact of Hyperglycemia in Patients with ST-Segment Elevation Myocardial Infarction Undergoing Percutaneous Coronary Intervention: The HORIZONS-AMI Trial

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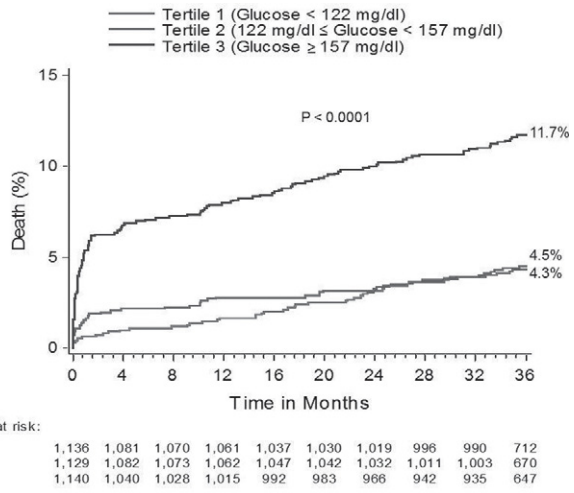
Background: The association between admission hyperglycemia and mortality in pts with ST-segment elevation myocardial infarction (STEMI) treated with primary PCI (PPCI) is not well established. Moreover, the optimal cutoff value for prediction of mortality has never been determined.
Methods: Admission glucose levels were available in 3,405 pts enrolled in the HORIZONS-AMI trial, of whom 566 (16.6%) had known diabetes mellitus. Outcomes were stratified by baseline glucose level and diabetes status.
Results: Median [IQR] admission glucose level in the entire study cohort was 138 [115, 171] mg/dl, and was higher in pts with vs. without diabetes (206 [161, 247] vs. 131 [112, 156] mg/dl, P<0.0001). Hyperglycemia was strongly associated with increased early and late mortality (Figure). By multivariable analysis, elevated admission glucose level (upper tertile) was an independent predictor of 3-year mortality in all pts (adjusted HR[95%CI] = 1.93 [1.35, 2.76], P=0.0003; diabetic pts (2.65 [1.28, 5.47], P=0.008); and non-diabetic pts (1.58 [1.05, 2.36], P=0.03). By ROC analysis, the best cut-off values for 30-day mortality were 169 mg/dl for all pts (AUC=0.76), 149 mg/dl for non-diabetics (AUC=0.77), and 231 mg/dl for diabetics (AUC=0.69).



Time-to-event curves through 36 months for all-cause death in the entire cohort

Conclusion: In patients with STEMI undergoing primary PCI, baseline hyperglycemia at the time of admission is an independent predictor of mortality in both diabetic and non-diabetic pts. Even mildly elevated admission glucose levels are associated with reduced survival in pts without known diabetes.

Endovascular

Room 112

Tuesday, November 8, 2011, 10:15 am - 12:25 pm

(Abstract nos 90 - 99)

TCT-90

The impact of BTK runoff score on the patency after stenting for SFA lesion

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Background: After Endovascular treatment (EVT) for SFA lesions, the in flow of BTK will increase. But very little is known about how the BTK flow or vascular resistance of BTK has impact on the outcome of EVT after SFA lesions. Present study was aimed to investigate the relationships between BTK flow and the patency after SFA stentings.
Methods: From April 2007 to June 2010, continuously 108 patients, 142 limbs who deployed self expandable naitinor stent for SFA lesion at our institution were enrolled in this study. The 'BTK score' was gave as the sum of following flow points; 'good 0', 'stenosis 1', 'collateral 2', 'poor 2.5', 'occlude 3' for each BTK artery (ATA,PA,PTA) and pedal arch. From the result of Primary patency after SFA stenting, we divide following two groups: Group NP; not patent, n=26 limbs, average BTK score 5.0±2.7 and Group P; patent, n=115 limbs, average BTK score 4.3±3.0. The patient, lesion, technical backgrounds and clinical outcome were evaluated and compared. In addition, the BTK score was divided in three following groups; Low 1-4/Intermediate 4-8/High 9-12. Results)
Results: Primly patency rate was 81% in this study setting. The patient backgrounds were well matched include CLI limbs (Group NP: 4 limbs 17%,Group P: 39 limbs 33%,p=0.10) and Rutherford category 5 or 6 cases (Group NP: 2 limbs 8.7%, Group P: 22 limbs 19%,p=0.36). TASK C, D limbs (Group NP: 18 limbs 78%>Group P: 64 limbs 55%,p=0.07) were tend to and CTO lesions (Group NP: 17 limbs 73%>Group P: 63 limbs 54%,p=0.04) were seen significantly higher in group NP. No cardiac death was seen in this study term. And no case of group NP and 2 cases of group P received major amputation. The number of Low/Intermediate/High BTK score (1-4/ 4-8/ 9-12 points) in group NP vs. group P were as follow; Low; 10 limbs 43.5% vs. 64 limbs 55.6%,p=0.07,Intermediate; 10 limbs 43.5% vs. 42 limbs 36.5%,p=0.03,High;3 limbs 13% vs. 9 limbs 7.8%,p=0.03.
Conclusion: From this study, it can be concluded that the Primary stent patency after EVT for SFA lesion is associated with the lesion severity and BTK runoff score severity.

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